ABSTRACT

Using low PF values in conjunction with traffic-adapted contention windows leads to substantial decreases in delay and jitter. In general, adaptation to traffic reduces contention or delay: opening up the contention window in congestion and closing it on relief. Residual

5 backoff adaptation provides for the reduction of the already decremented backoff values of stations that interrupted the backoff countdown process due to a transmission. It is good to adapt both the contention window and the residual backoff in order to avoid jitter. Otherwise, if the contention window is reduced but residual backoffs stay unchanged, new arrivals will enjoy shorter backoff delays than older ones, resulting in greater jitter. Adjusting both preserves the

10 relative ordering of backoff counter values, which implies also some form of age ordering. Different adjustments can be applied to different priority traffic.